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The Hand Appliance.

To connect the Hand appliance Handle.

In order to bring the handle of the machine into the operating position, swing the handle out and across firmly into position, when the handle will be found to be locked ready for use.

To disconnect the Hand appliance Handle.

When the work is finished, pull out the spring piston, (A, fig. 1) and return the handle to its original position.

To connect and disconnect the Balance Wheel to the stitching Mechanism.

It is customary to deliver Sewing Machines with the Balance Wheel disconnected from the Stitching Mechanism. At all times when the machine is not in use this disconnection should be effected. To connect the Balance Wheel to the Stitching Mechanism hold the Balance Wheel (A fig. 2) with the left hand and turn the centre disc (B fig. 2) clockwise, i.e. away from you. To disconnect the Balance Wheel, turn the centre disc anti-clockwise, i.e. towards you.

When operating the machine the Balance Wheel must always turn towards you, and the handle away from you. This is important.

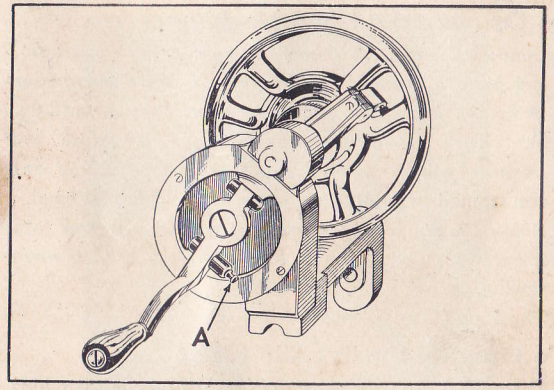


Fig. 1

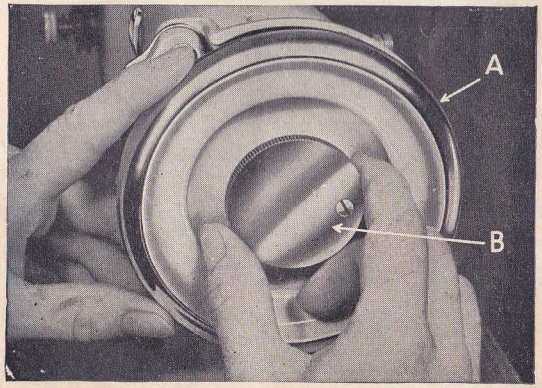


Fig. 2

To Operate the Hand Machine.

Connect the Balance Wheel to the Stitching Mechanism, and place a piece of material under the Presser Foot (A fig. 3). Lower the latter by means of the Lifter (B fig. 3). Turn the handle away from you to work the machine which should be unthreaded until you are accustomed to guiding the material with the left hand.

Note— Do not work the machine with the presser foot lowered, or with the needle threaded except when sewing.

The Slide (C fig. 3) must be kept closed.

To Operate the Treadle Machine.

Disconnect the Balance Wheel from the Stitching Mechanism. Place both feet upon the treadle and turn the Balance Wheel towards you, at the same time allowing the feet to move freely and lightly with the motion of the treadle. Continue to do this until a regular and easy movement is acquired, and you are able to work the treadle so that you can re-start the machine without the Balance Wheel turning in the wrong direction.

When familiar with the working movement, re-connect the Balance Wheel to the Stitching Mechanism, and place a piece of material under the Presser Foot (A fig. 3). Lower the Presser Foot by means of the Presser Bar Lifter (B fig. 3) and again work the machine which should be unthreaded until you have become accustomed to guiding the material.

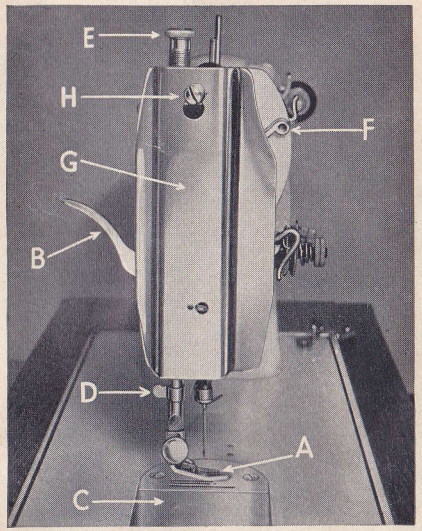


Fig. 3

To Thread the Needle.

Place cotton reel on reel pin (J fig. 4), take cotton over the thread guide (G fig. 4) down between tension discs (M fig. 4) over check spring (N fig. 4) under thread tension lift lever (O fig. 4) up and through take up lever (P fig. 4) from right to left, down through face plate guide (Q fig. 4) through needle bar guide (R fig. 4) and through the eye of the needle from left to right.

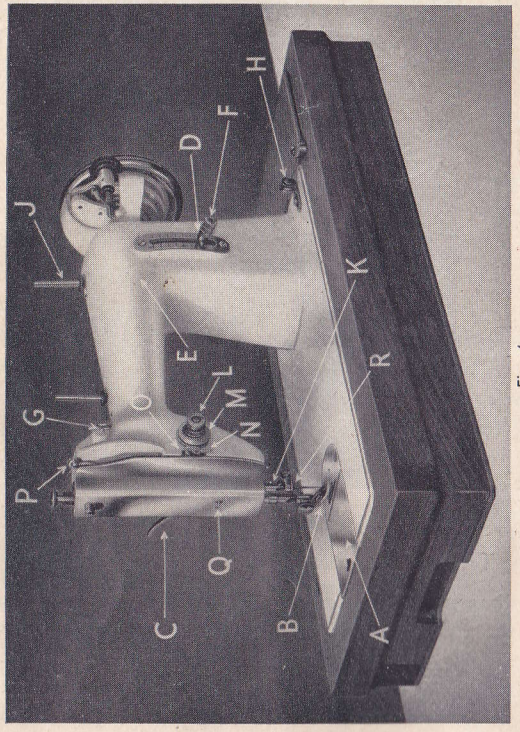


Fig. 4

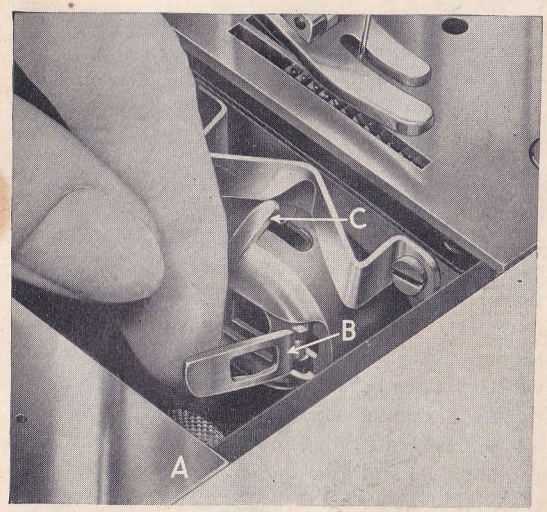


Fig. 5

To take out and replace Bobbin in Bobbin Case.

Open Slide (A fig. 5), lift Bobbin Case Latch (B fig. 5), pull out bobbin case. While the latch (B fig. 5) is held open the bobbin is retained in its case. On releasing the latch and turning the case downwards, the bobbin will drop out. **To Thread Bobbin Case.** Hold the Bobbin in the right hand, Bobbin Case in the left hand, place Bobbin in Bobbin Case, cotton pulling from top of Bobbin (fig. 8). Pull cotton down slot (A fig. 9), under

Spring (B fig. 10) which gives tension for sewing. Pull cotton out, and hold latch in Bobbin Case with Bobbin Case Arm (C fig. 5) upright, locate Bobbin Case on centre pin, push in. Listen for click as case fits properly home. Close slide.

To Wind the Bobbin.

Place cotton reel on reel pin (J fig. 4). Take cotton to cotton guide (G fig. 4) through tension discs (H fig. 4) on right of base. Thread the end of the cotton through the slot in the bobbin from the inside to the outside (A fig. 11). Take a few turns with the cotton round the bobbin winding towards you in order to start the cotton winding. Place bobbin on winder spindle (B fig. 6) so that the slot on the outside of the bobbin (B fig. 11) fits on the small pin (C fig. 6) on the winder spindle. The cotton should lead from the tension discs (A fig. 7) to the front of the bobbin (B fig. 7). Press the winder down

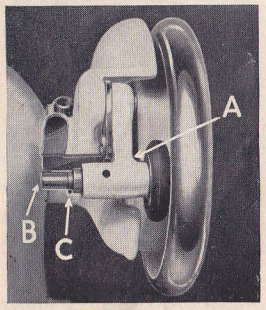


Fig. 6

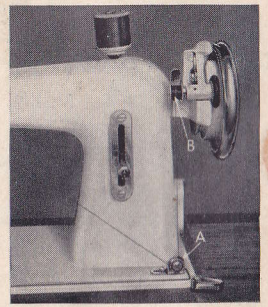


Fig. 7

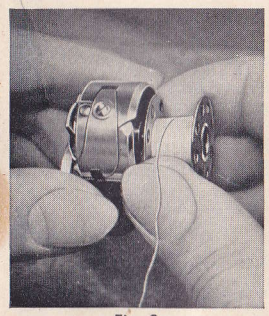


Fig. 8

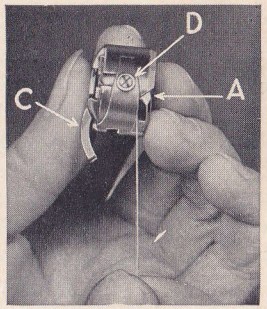


Fig. 9

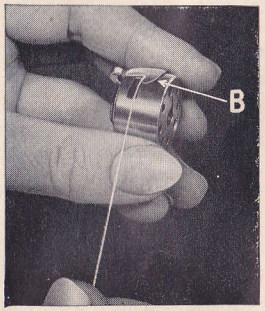


Fig. 10

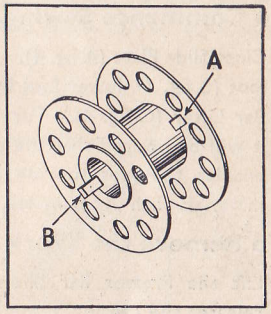


Fig. 11

(at A fig. 6) until it locks into position, listen for the click as it locks. Turn centre disc on balance wheel anti-clockwise i.e. towards you, to disconnect Balance Wheel from Stitching mechanism. When the bobbin is sufficiently full, the automatic release will free the Bobbin Winder.

To Prepare for Sewing.

Give Balance Wheel one complete turn, towards you holding upper thread slack from hand to needle with left hand, which will enable you to pick up the under cotton from the Bobbin Case. Place the two cottons at the back of the Presser Foot. Adjust length of stitch by means of Stitch Regulator (D fig. 4). Lever towards central position gives small stitches, lever towards ends gives larger stitches (see paragraph "To alter length of stitch"). The machine is now ready for sewing.

To Commence Sewing.

Close Slide Plate (A fig. 4). Place material under Presser foot (B fig. 4), lower foot by pressing down the Presser Bar Lifter (C fig. 4). Turn the handle away from you. It will be noticed that the presser foot is hinged. This enables the foot to ride over uneven thicknesses of materials such as seams etc.

To Remove the Work

Lift the Presser Bar Lifter, which at the same time releases the tension automatically, enabling you to pull out the work freely. It is important to note that the work should be pulled out from the back away from you, otherwise there is danger of breaking the needle.

A cotton cutter is fitted to the presser bar (D fig. 3) to avoid the necessity of breaking the cotton and perhaps damaging the needle.

To Set New Needle.

Raise the Needle Bar (K fig. 4) to its highest point by turning the Balance Wheel towards you. Hold the Needle in your left hand with the flat side to the right. Loosen the Clamp (A fig. 12) by the slotted screw (B fig. 12) with the screwdriver provided, and insert the needle into the groove, in the left hand side of the Needle Clamp as high as it will go. The long groove on the Needle should now be showing on the left hand side of the Needle Clamp. Tighten the screw (B fig. 12) with the screwdriver. Remember the flat of the needle should be towards the bottom of the slot in the needle bar.

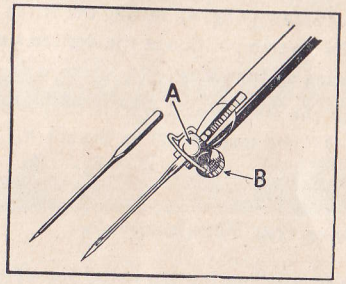


Fig. 12

To Alter the Length of Stitch and Direction of Feed.

The Stitch Regulator is placed in the Arm (E fig. 4). The forward and backward movement of the Stitching Mechanism is controlled by the Stitch Regulator Lever (D fig. 4). When this lever is in the central position the mechanism is in neutral and there is no stitch motion. It is not advisable to run the machine in this position. To make the machine stitch forward, lower the lever below the centre line marked " O " in the direction of the mark " F." To reverse, move the lever above the centre line in the direction of the mark " R." The pointer indicates the stitch size.

Approximately the same size stitch for the forward or reverse movement may be obtained by loosening the Knurled Set Screw (F fig. 4), setting the Stitch Regulator Lever in the reverse position at the desired size of stitch and tightening up the screw.

The nearer the Regulator Lever is to the centre line marked " O " the smaller will be the stitch.

To Regulate the Tension.

For ordinary stitching the tension of the upper and the under threads should be equal so as to lock both threads in the centre of the work (fig. 13). If either tension is stronger than the other, imperfect stitching will result

(fig. 14 & fig. 15). The correct stitch can usually be obtained by merely varying the tension on the upper thread. Before doing this, lower the Presser Foot, turn Top Tension Nut (L fig. 4) clockwise quarter turn at a time to tighten tension.

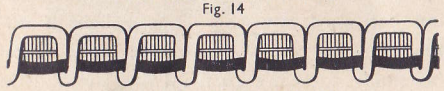
Turn Top Tension Nut anti-clockwise quarter turn at a time to loosen tension.

The Bobbin Case tension should not be touched, as all machines are set before leaving the factory, but if it is necessary to tighten or loosen the Tension Spring Screw (D fig. 9) turn clockwise to tighten and anti-clockwise to loosen, quarter turn only at a time.

To obtain a perfect stitch, fine fabrics require a lighter tension while heavy materials need greater tension.

Correct Stitch
Fig. 13

Needle thread tension too strong
Fig. 14



Needle thread tension too weak
Fig. 15

To Turn a Corner.

Stop the machine when the Needle is rising, but still in the material, raise the Presser Foot and turn the work, using the Needle as a pivot. Lower the Presser Foot and re-commence to sew.

To Change the Pressure on Material.

The Presser Mechanism is carefully set before the machine leaves the factory and except for exceptional reasons should not be touched. Should it be necessary to lighten the pressure for very fine silk or flimsy material turn the Presser Bar Screw (E fig. 3) anti-clockwise two or three turns. For very heavy materials turn the Presser Bar Screw clockwise.

Removal of Shuttle.

Turn the balance wheel towards you until the thread take-up lever (F fig. 3) is at its highest point. Raise the Machine backwards on the hinges. Loosen off the retaining plate screw (A fig. 16), lift off the retaining plate assembly complete (B fig. 17). The Shuttle can then be lifted out (C fig. 18) from the Shuttle carrier.

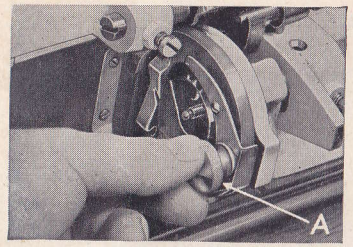


Fig. 16

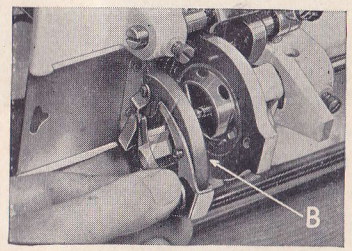


Fig. 17

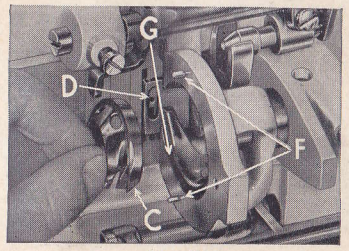


Fig. 18

To replace the Shuttle.

Place the Shuttle in the carrier (A fig. 19) to form a circle with the driving fork (B fig. 19). Replace Retaining Plate Assembly (B fig. 17) by locating on the two pins (F fig. 18) and screw up retaining screw.

Operation of the Drop Feed Mechanism.

For darning or similar work where it is necessary to move the material in a direction other than straight forward or backwards, the feed teeth must be lowered out of action. This is carried out by opening the slide plate (A fig. 4) and with the finger moving the drop feed lever (B fig. 20) towards the balance wheel.

To bring the feed teeth into action move the drop feed lever away from the balance wheel.

Cleaning the Feed.

It is important that the feed teeth and the mechanism under the teeth be kept free from fluff and dirt. The best method is to brush the feed teeth with a stiff brush and brush underneath the feed teeth (D fig. 18) with a small paint brush.

The Shuttle carrier (A fig. 19) should also be kept clean to ensure maximum efficiency.

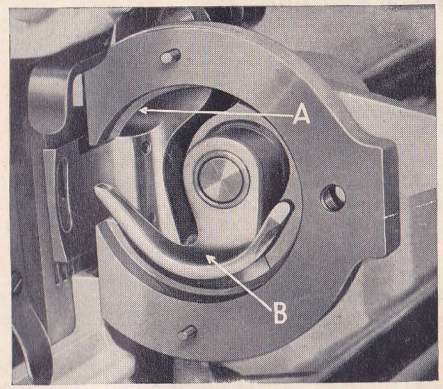


Fig. 19

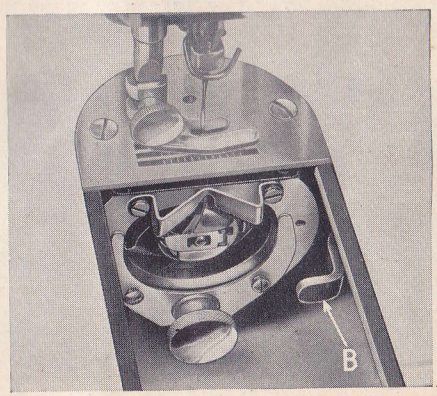


Fig. 20

To Oil the Machine.

In order to ensure easy running, the machine requires to be oiled so that all moving parts in contact are covered with a film of oil. It is important that these parts should not become dry.

Where the machine is used every day, oil should be applied daily. An occasional oiling is sufficient if the machine is used only periodically. A drop of oil applied at the points indicated by the arrows in fig. 21 and fig. 22 and 23 is sufficient to ensure satisfactory lubrication.

To oil the needle bar mechanism, remove the face plate (G fig. 3) by loosening the screw (H fig. 3) and slipping the plate up over it.

The Shuttle carrier should be oiled from time to time, and this is effected by allowing a drop of oil to penetrate under the driving fork (G fig. 18) and on to the Shuttle carrier.

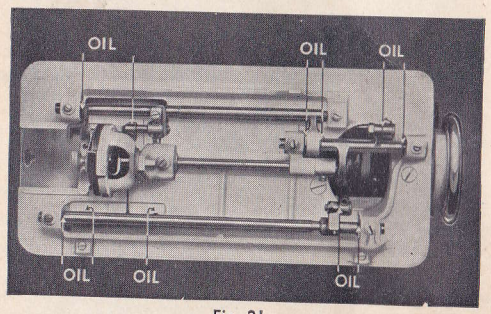
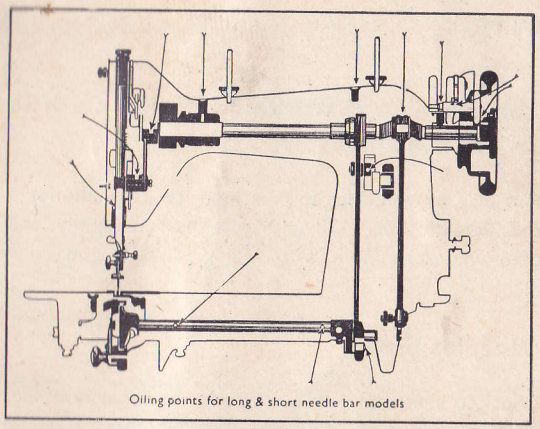
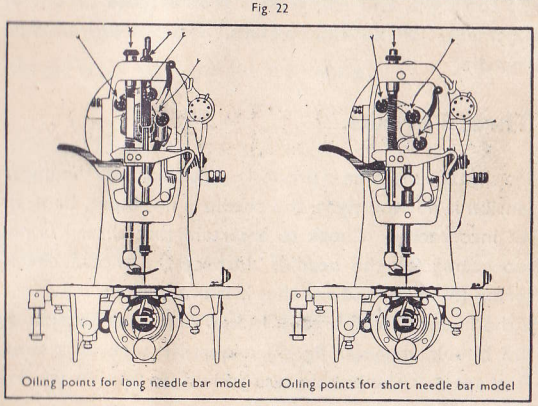


Fig. 21



Oiling points for long & short needle bar models

Fig. 22



Oiling points for long needle bar model

Oiling points for short needle bar model

Fig 23

HINTS.

If the machine is working heavily, i.e. if it does not run smoothly.

This may happen after the machine has been idle for a considerable time. Oil with paraffin, run rapidly, and then wipe clean and oil with high grade sewing machine oil.

If Needles break.

Check to see that needle is not bent, the upper tension is not too tight, and the presser foot is loose or out of alignment. Do not sew too heavy material with too fine a needle.

If Thread breaks.

See that the machine is properly threaded, that the upper tension is not too tight, the needle is not blunt, bent, or set incorrectly. Check to ascertain that thread is not too coarse for the needle. Inspect the thread check-spring (N fig. 4) and see that it is not broken.
If the under thread breaks, loosen the under tension on the bobbin case (D fig. 9) a quarter turn at a time. First see that the bobbin case and under tension are free from fluff.

If the machine skips stitches.

Make sure that the needle is correctly set (see fig. 12), is not blunt, bent, or too fine for the thread.

If the stitches are looping.

See that the thread check spring (N fig. 4) is not broken, that the upper and under tensions are equal, that both bobbin case and needle are properly threaded, and the thread is the right size for the needle.

If the material puckers.

This is usually caused by unequal tensions. Make sure that both upper and under tensions are equal.

The Electric Motor Unit.

The Electric motor is 1/20th Horse Power and is wound for 100/110, 120/130 or 200/250 volts. It can be used on either A.C. or D.C. supply, as it is Universal. It operates on 40/60 cycles.

Do not run the electric machine too fast when you begin sewing nor when the balance wheel is disconnected from the stitching mechanism, as in bobbin winding. If the belt becomes too slack, tighten by loosening the two screws holding the motor to the bracket and move the motor back, away from the machine. Tighten up the screws again.

To replace the bulb, first disconnect the lead from the machine. The bulb is put in and taken out like an ordinary bayonet lamp.

The light switch is alongside the knurled ring which adjusts the lamp shade.

The foot control, similar to a motor car accelerator, plugs into the motor which is fitted with a shrouded socket to prevent the possibility of shock.

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